

Science, Grades 4, 8, and 11

Chart 1: 4, 8, 11 SC

The chart below shows the National Percentile Ranks for grades 4, 8, and 11.

- In 2001, grade 4 scored an NPR of 71%, grade 8 an NPR of 64%, and grade 11 an NPR of 70%.
- The 2002 NPR for grade 4 dropped slightly to 69% while the grade 11 increased slightly. Grade 8 scores remained the same as 2001.

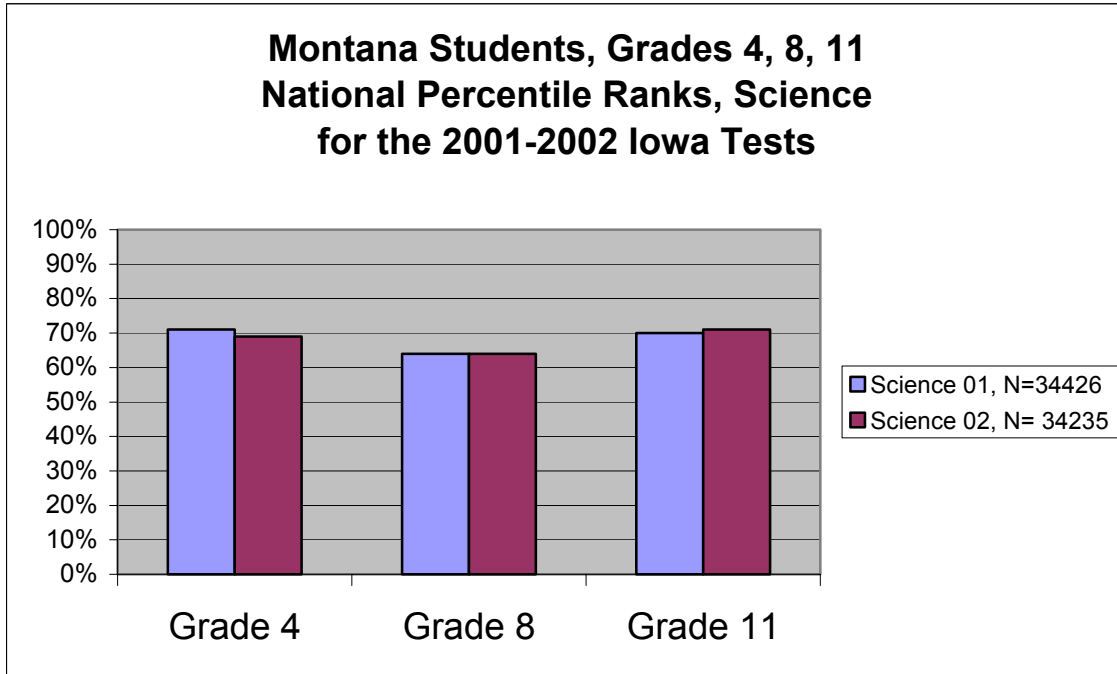


Table 1: 4, 8, 11 SC

Science National Percentile Rank for each disaggregation across Montana in 2001 and 2002.

Groups	Grade 4		Grade 8		Grade 11	
	2001	2002	2001	2002	2001	2002
All Students	71%	69%	64%	64%	70%	71%
Students Without Disabilities	72%	71%	67%	68%	72%	73%
Students With Disabilities	50%	46%	36%	34%	32%	34%
Female Students	70%	68%	65%	66%	72%	73%
Male Students	72%	70%	63%	63%	67%	68%
Native American Students	50%	49%	42%	41%	51%	48%
White Students	73%	72%	67%	68%	71%	72%
Students on Free/Reduced Lunch	59%	58%	53%	53%	58%	58%
LEP*	Na	35%	Na	32%	Na	40%

* LEP 2001 data were incomplete.

Table 2: 4, 8, 11 SC

Science: The table below shows the percentage of students for each disaggregation scoring in each performance category in grades 4, 8, and 11 for 2001 and 2002.

Groups		Grade 4				Grade 8				Grade 11			
		Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3
All Students	2001	22%	60%	10%	8%	18%	60%	12%	10%	21%	60%	9%	10%
	2002	21%	60%	10%	9%	18%	59%	12%	11%	23%	58%	9%	10%
Students Without Disabilities	2001	24%	61%	9%	7%	20%	62%	11%	7%	22%	62%	8%	8%
	2002	22%	61%	10%	7%	19%	62%	11%	8%	25%	60%	7%	8%
Students With Disabilities	2001	8%	53%	20%	19%	3%	37%	24%	37%	2%	39%	21%	38%
	2002	6%	51%	20%	23%	3%	34%	25%	38%	2%	39%	23%	36%
Female Students	2001	21%	61%	10%	8%	16%	65%	11%	8%	21%	64%	8%	7%
	2002	19%	62%	11%	8%	17%	63%	11%	9%	23%	62%	8%	7%
Male Students	2001	24%	59%	9%	8%	20%	55%	12%	12%	21%	57%	10%	12%
	2002	22%	58%	11%	9%	18%	56%	13%	13%	23%	55%	9%	13%
Native American Students	2001	8%	52%	20%	20%	4%	46%	21%	29%	7%	55%	18%	19%
	2002	6%	55%	20%	19%	4%	44%	24%	28%	7%	57%	13%	23%
White Students	2001	20%	60%	18%	2%	20%	62%	11%	8%	22%	61%	8%	9%
	2002	23%	62%	8%	7%	20%	62%	10%	8%	25%	59%	7%	9%
Students on Free/Reduced Lunch	2001	14%	52%	18%	16%	8%	55%	18%	18%	11%	59%	14%	16%
	2002	12%	60%	14%	14%	8%	55%	18%	19%	13%	58%	12%	17%
LEP*	2001	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	2002	1%	46%	24%	29%	1%	33%	30%	36%	4%	49%	16%	31%

*LEP 2001 data were incomplete.

Table 3: 4, 8, 11 SC

Customized Skills Reports: Montana Science Standards tested in the 2001 and 2002
Iowa Tests

Standard	Grade 4				Grade 8				Grade 11			
	# of Items		Percent Correct		# of Items		Percent Correct		# of Items		Percent Correct	
Design, conduct, evaluate and communicate investigations.	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
	19	19	60%	60%	28	28	68%	67%	45	45	56%	57%
Understand physical and chemical systems.	5*	5*	69%	68%	14	14	65%	65%	9*	9*	53%	53%
Understand the structures and functions of living things.	10	10	67%	66%	7	7	59%	58%	5*	5*	59%	59%
Understand Earth's systems and interactions.	8	8	67%	66%	8*	8*	59%	59%	1*	1*	64%	63%
Understand the impact of science and technology on society.	2*	2*	58%	58%	3*	3*	55%	55%	1*	1*	61%	60%
* The Iowa Tests measure the knowledge dimension of the Montana Standard, but do not adequately measure the application aspect.												

Tables 4a and 4b: 11 SC

ACT Science Reasoning results for the high school graduating classes of 2001 and 2002.

	Average Score All National	Average Score All Montana	Average Score White Montana	Average Score Native American Montana
2001	21.0	21.9	22.1	18.4
2002	20.8	21.8	21.9	18.25

Number of Montana students participating in the ACT

	Total Montana Students	White Montana	Native American Montana
2001	6,641	5,699	319
2002	6,368	5,460	300

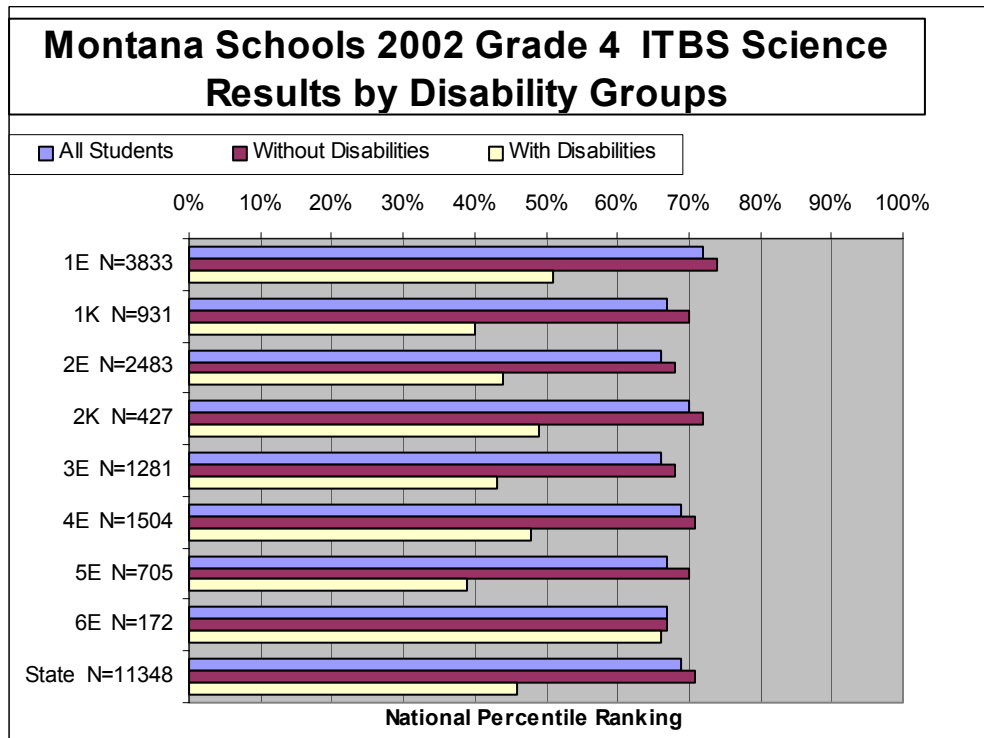
Table 5: 4, 8, 11 SC

NAEP data from 1994 and 1998 are included to add the picture of student achievement in Science. Although NAEP data give another perspective to the picture of Montana students in grades four and eight tested in 1994 and 1998, these are not the same 4th and 8th grade students measured in the 2002 statewide assessment.

With the scores of Montana White and Montana Native American students are percent of students who scored basic or above. It should be noted that the number of White students tested is considerably larger and therefore, generalizations are safer. For example, in the 1994 grade 4 test, 1,972 Montana White students and 226 Montana Native American students were included in the testing sample.

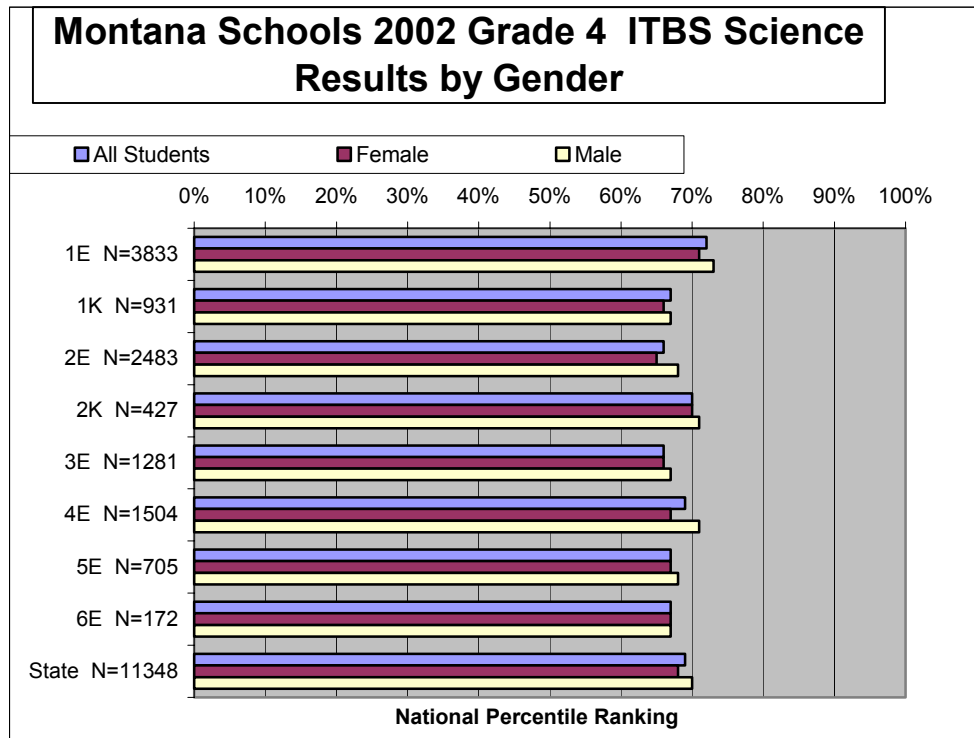
	Average Score					
Grade:Year	All National	White National	Native American National	All Montana	White Montana	Native American Montana
4: 2000	150	160	140	160	164 (86%)	145 (63%)
8: 1996	150	159	148	162	166 (83%)	139 (44%)
8: 2000	151	162	134	165	168 (84%)	143 (49%)

Chart 4.1 SC



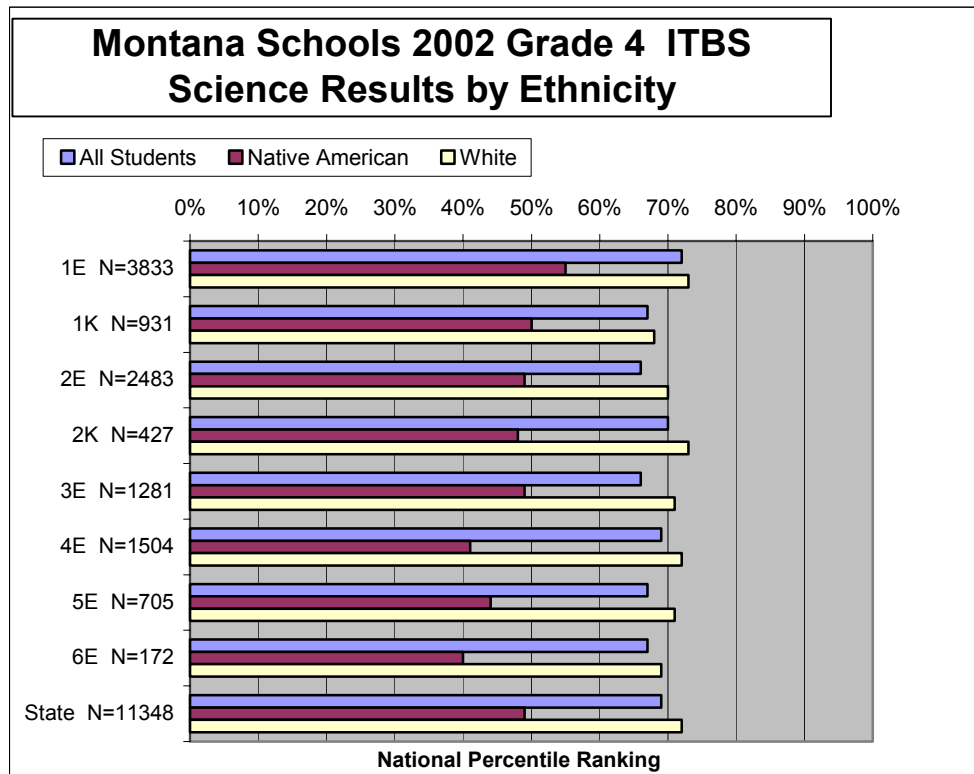
1. All students
 - The Science NPR for all Montana grade 4 students is 69%, two percentage points below 2001.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is 71%, one percentage point below 2001. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Students with disabilities
 - Statewide, the NPR for students with disabilities is 46%, four percentage points below 2001. That number is relatively stable across the state with most district size categories plus or minus 4-6 percentage points except 6E where the number of students tests is too small for comparisons.
4. Comparisons
 - Statewide, Montana students without disabilities scored 25 percentage points above students with disabilities, 71% and 46% respectively. That number is relatively stable.

Chart 4.2 SC



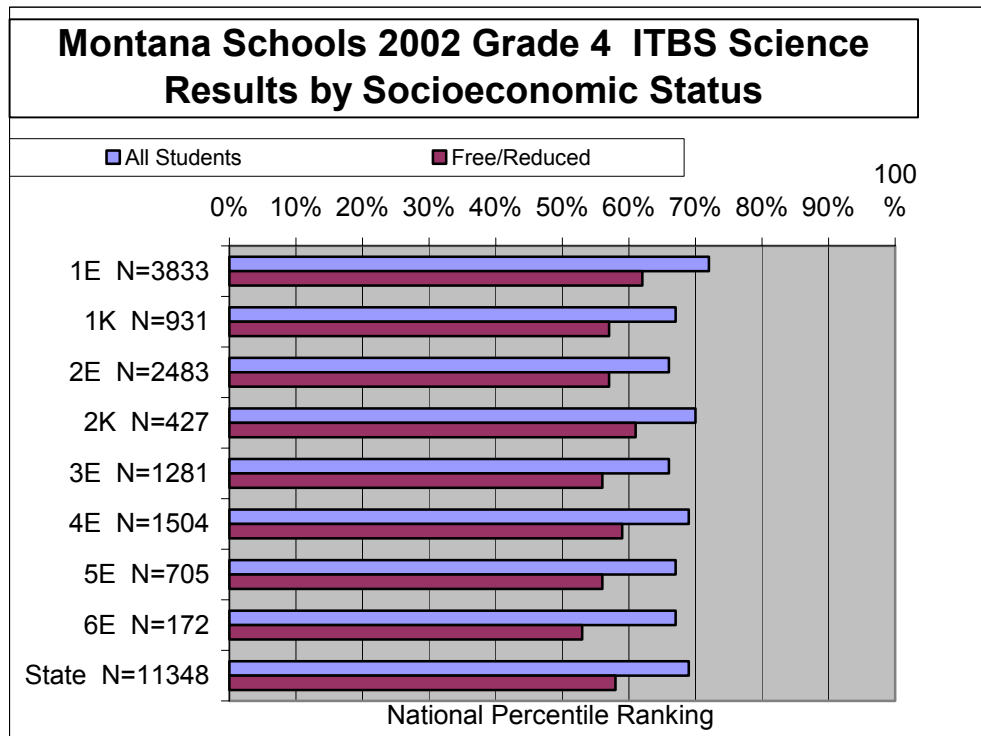
1. All students
 - The Science NPR for all Montana grade 4 students is 69%.
2. Female students
 - Statewide, the NPR for female students is 68%, two percentage points below 2001. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Male students
 - Statewide, the NPR for male students is 70%, two percentage points below 2001. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
 - Statewide, male students scored two percentage points above female students, 70% and 68% respectively.

Chart 4.3 SC



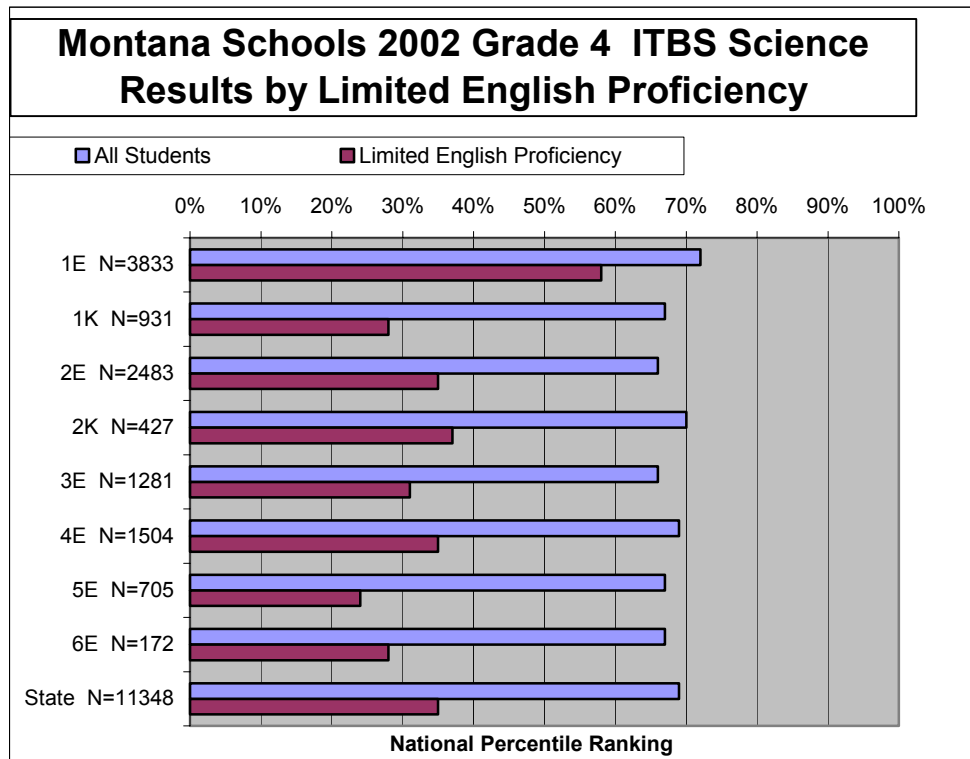
1. All students
 - The Science NPR for all Montana grade 4 students is 69%.
2. Native American students
 - Statewide, the NPR for Native American students is 49%, one percentage point below 2001. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 6E where the number of students tested is too small for comparisons; however, district size category 4E has a sufficient number of students for a cautious comparison. The NPR for district size category 4E is 41%.
3. White students
 - Statewide, the NPR for White students is 72%, one percentage point below 2001. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
 - Statewide, White students scored 23 percentage points above Native American students. That number of relatively stable.

Chart 4.4 SC



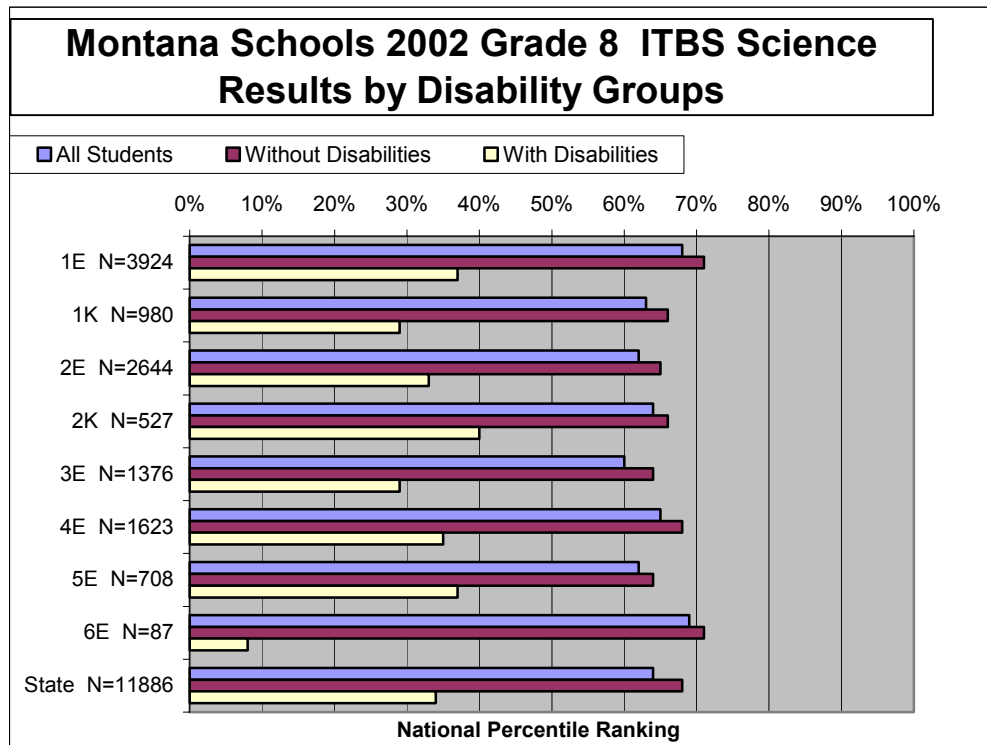
1. All students
 - The Science NPR for all Montana grade 4 students is 69%.
2. Students participating in free/reduced lunch programs
 - Statewide, the NPR for students participating in free/reduced lunch programs is 58%, one percentage point below 2001. That number is stable with all district size categories plus or minus 2-4 points.
3. Comparisons
 - Statewide, all Montana students scored eleven percentage points above participating students.

Chart 4.5 SC



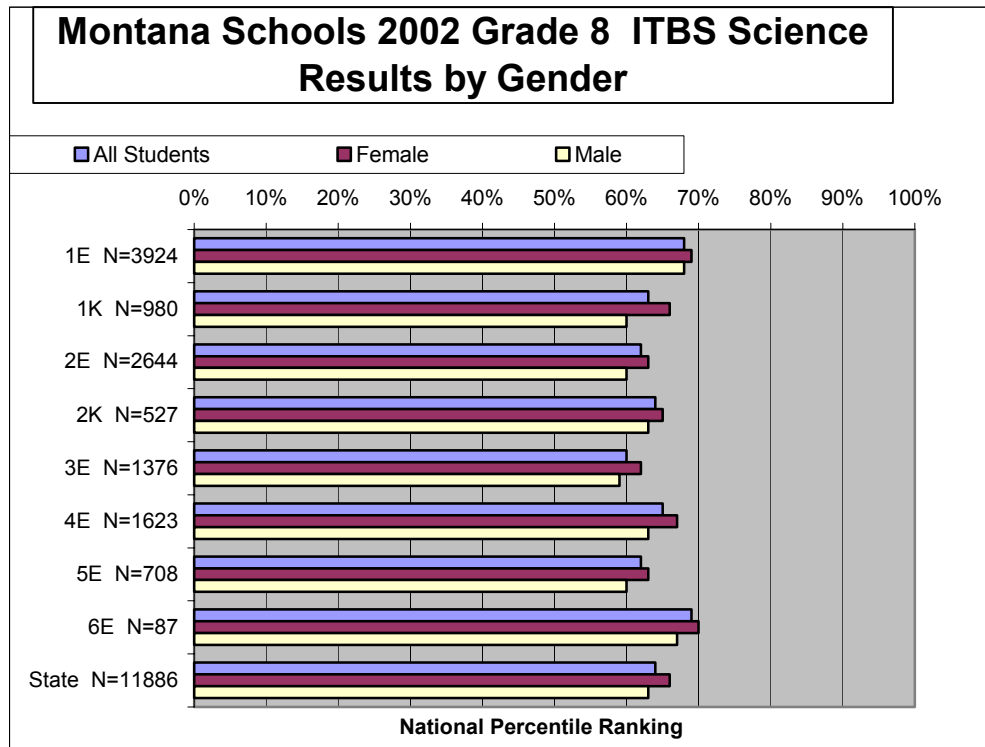
1. All students
 - The Science NPR for all Montana grade 4 students is 69%.
2. Students with limited English proficiency (LEP)
 - Statewide, the NPR for LEP students is 35%. (2001 LEP data were incomplete.) The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparison
 - Statewide, all Montana students scored 34 percentage points higher than limited English proficient students. That number varies among school size categories because of the wide variation in the number of LEP students tested.

Chart 8.1 SC



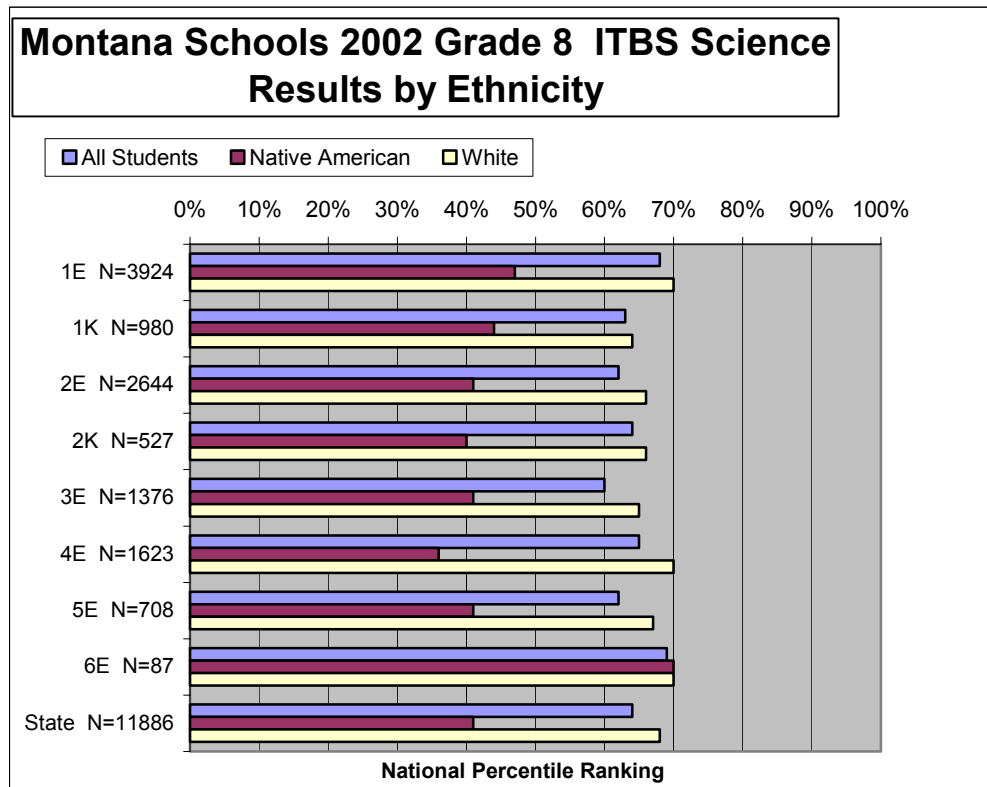
1. All students
 - The Science NPR for all Montana grade 8 students is 64%, the same as 2001.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is 68%, one percentage point above 2001. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Students with disabilities
 - Statewide the NPR for students with disabilities is 34%, two percentage points below 2001. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 6E where the number of students tested is too small for comparisons.
4. Comparisons
 - Statewide, Montana students without disabilities scored 34 percentage points above students with disabilities, 68% and 34% respectively.

Chart 8.2 SC



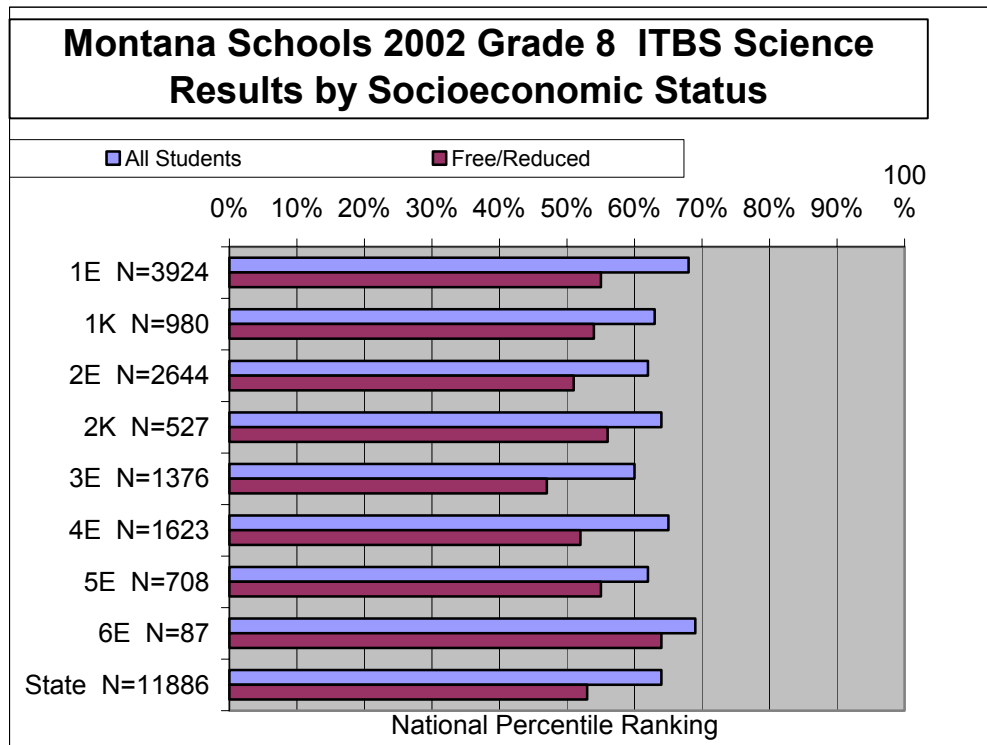
1. All students
 - The Science NPR for all Montana grade 8 students is 64%.
2. Female students
 - Statewide, the NPR for female students is 66%, one percentage point above 2001. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Male students
 - Statewide, the NPR for male students is 63%, the same as 2001. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
 - Statewide, female students scored three percentage points above male students. 66% and 63% respectively.

Chart 8.3 SC



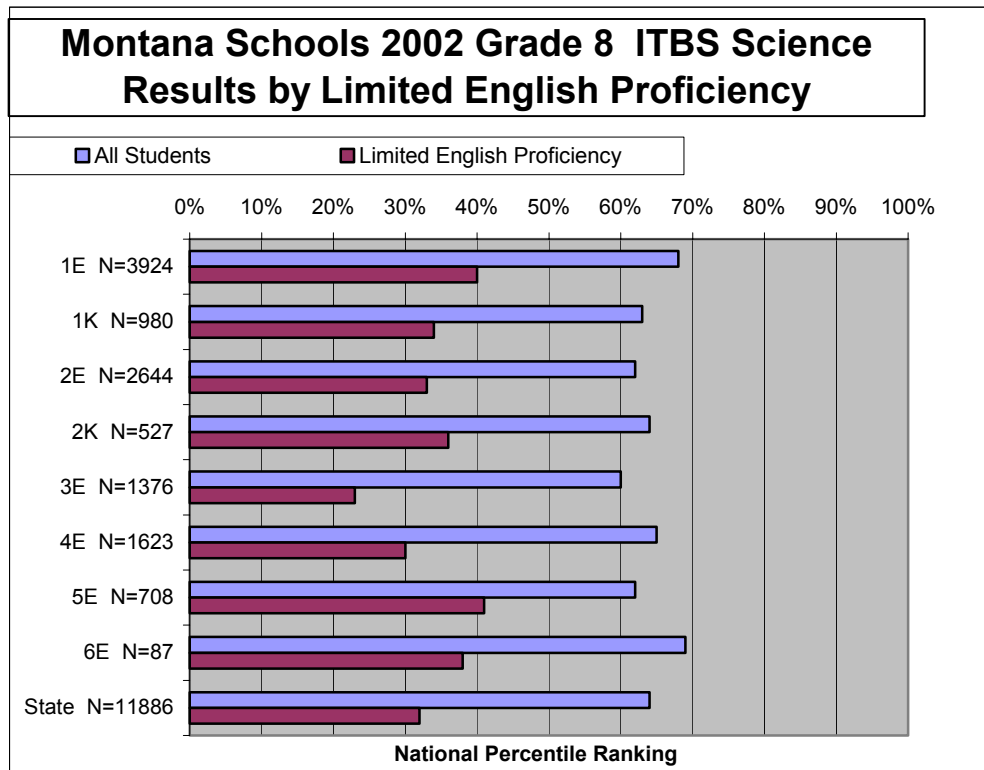
1. All students
 - The Science NPR for all Montana grade 8 students is 64%.
2. Native American students
 - Statewide, the NPR for Native American students is 41%, one percentage point below 2001. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 6E where the number of students tested is too small for comparisons.
3. White students
 - Statewide, the NPR for White students is 68%, one percentage point above 2001. that number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
 - Statewide, Montana White students scored 27 percentage points above Native American students, 68% and 41% respectively.

Chart 8.4 SC



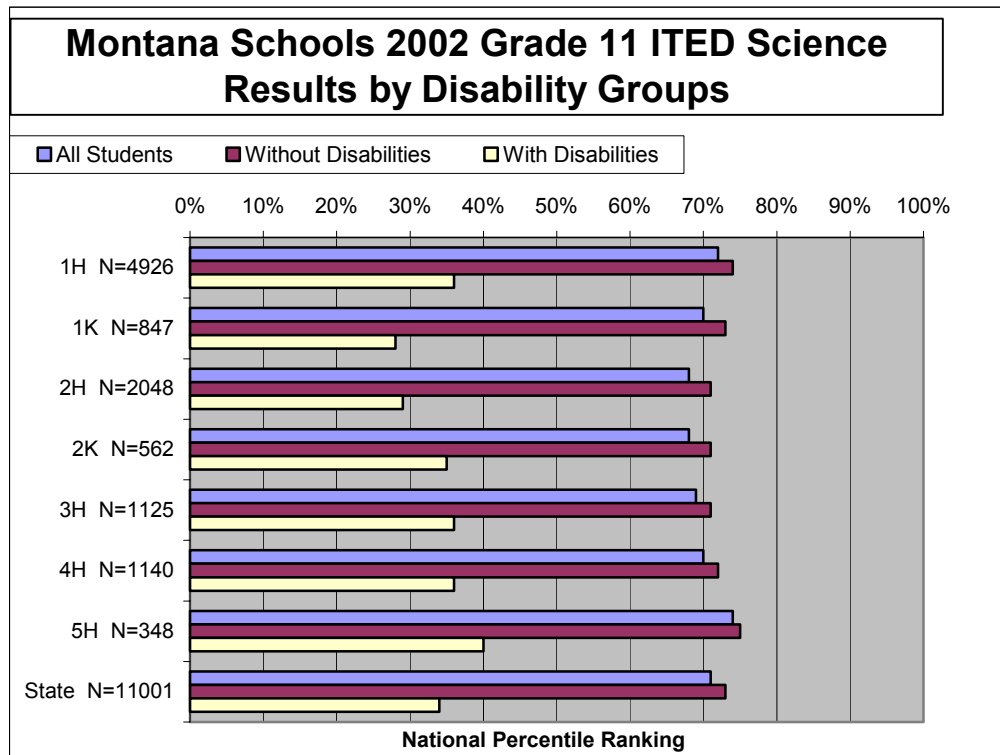
1. All students
 - The Science NPR for all Montana grade 8 students is 64%.
2. Students participating in free/reduced lunch programs
 - Statewide, the NPR for students participating in free/reduced lunch programs is 53%, the same as in 2001. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 6E where the number of students tested is too small for comparisons.
3. Comparisons
 - Statewide, all Montana students scored eleven percentage points above students participating, 64% and 53% respectively.

Chart 8.5 SC



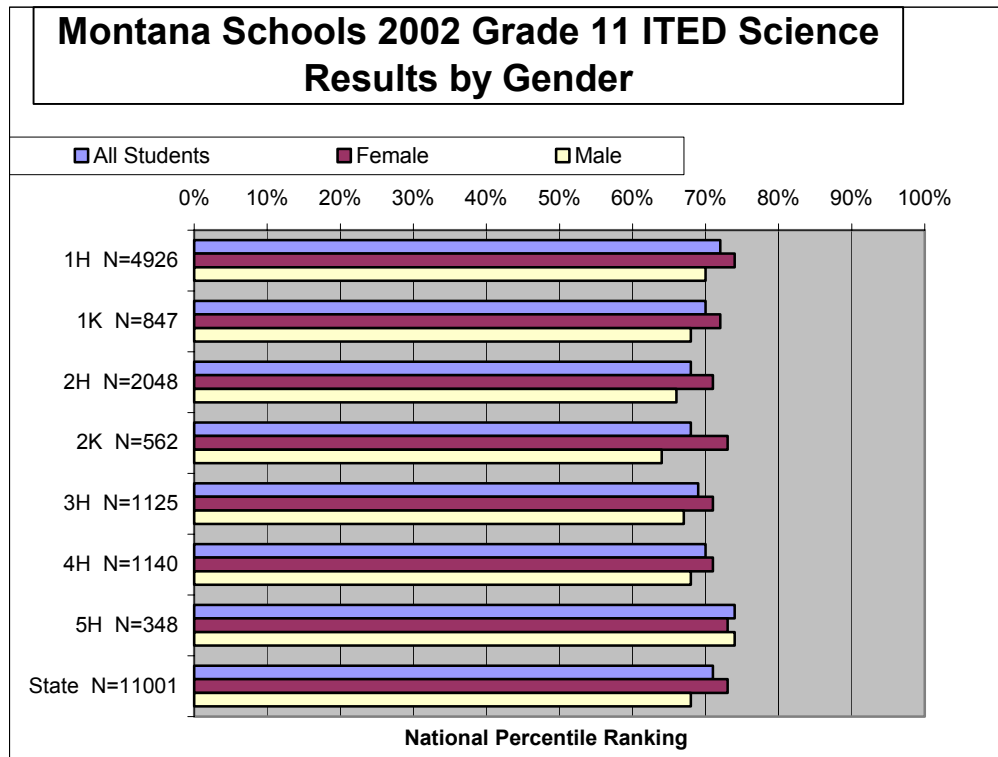
1. All students
 - The Science NPR for all Montana grade 8 students is 64%.
2. Students with limited English proficiency (LEP)
 - Statewide, the NPR for LEP students is 32%. (2001 LEP data were incomplete.)
The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparison
 - Statewide, all Montana students scored 32 percentage points higher than limited English proficient students. That number varies among school size categories because of the wide variation in the number of LEP students tested.

Chart 11.1 SC



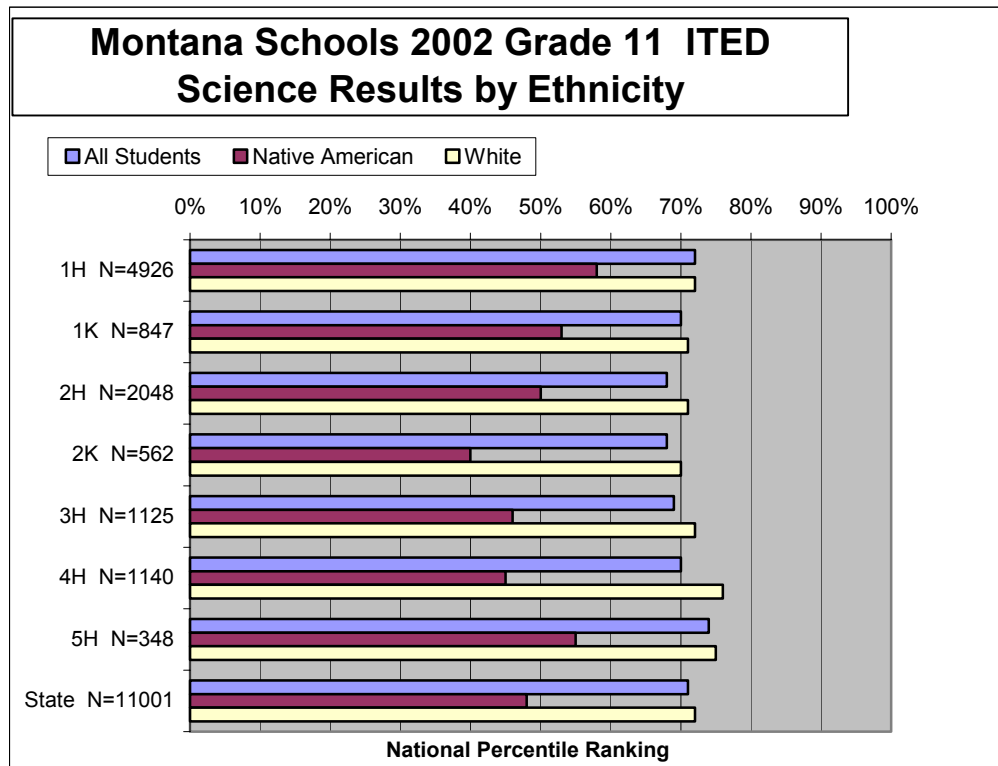
1. All students
 - The Science NPR for all Montana grade 11 students is 71%, one percentage point above 2001.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is 73%, one percentage point above 2001. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Students with disabilities
 - Statewide the NPR for students with disabilities is 34%, two percentage points above 2001. That number is stable across the state.
4. Comparisons
 - Statewide, students without disabilities scored 39 percentage points above students with disabilities, 73% and 34% respectively.

Chart 11.2 SC



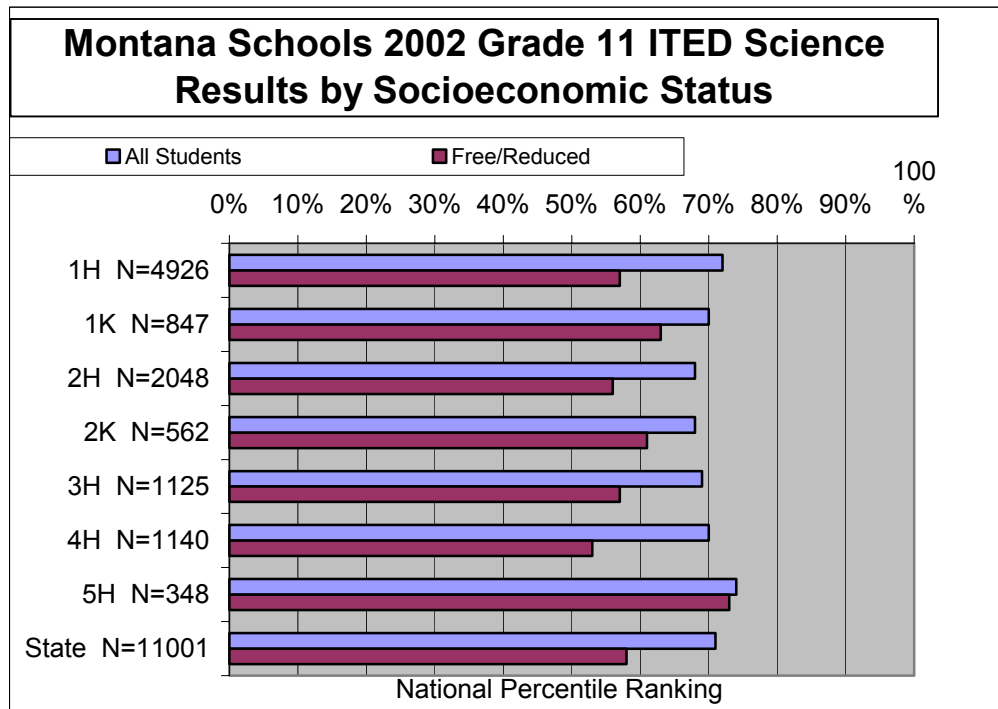
1. All students
 - The Science NPR for all Montana grade 11 students is 71%.
2. Female students
 - Statewide, the NPR for female students is 73%, one percentage point above 2001. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Male students
 - Statewide, the NPR for male students is 68%, one percentage point above 2001. That number is stable across the state with all district size categories plus or minus 2-5 percentage points.
4. Comparisons
 - Statewide, female students scored five percentage point above male students, 73% and 68% respectively.

Chart 11.3 SC



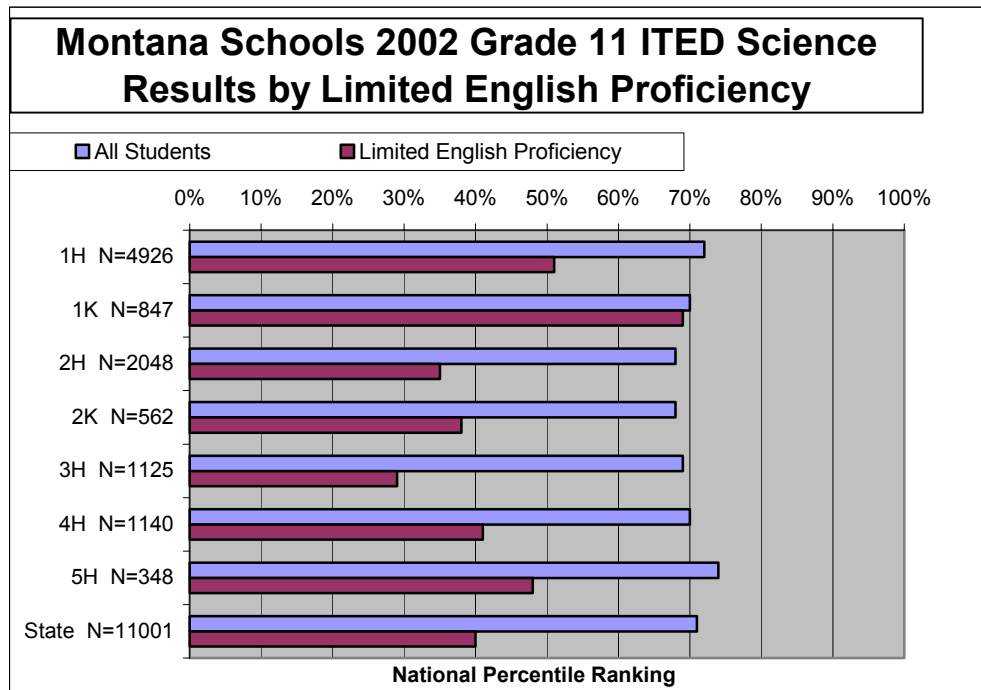
1. All students
 - The Science NPR for all Montana grade 11 students is 71%.
2. Native American students
 - Statewide, the NPR for Native American students is 48%, three percentage points below 2001. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 5H where the number of students tested is too small for comparisons and 1H where the number is sufficient for cautious comparisons. The NPR for Native American students in the 1H district size category is 58%.
3. White students
 - Statewide, the NPR for White students is 72%, one percentage point above 2001. That number is stable.
4. Comparisons
 - Statewide, Montana White students scored 24 percentage points above Native American students, 72% and 48% respectively. That number is relatively stable.

Chart 11.4 SC



1. All students
 - The Science NPR for all Montana grade 11 students is 71%.
2. Students participating in free/reduced lunch programs
 - Statewide, the NPR for students participating in free/reduced lunch programs is 58%, the same as 2002. That number is relatively stable with most district size categories plus or minus 2-4 percentage points except 5H where the number is participating students tested is too small for comparisons.
3. Comparisons
 - Statewide, all Montana students scored thirteen percentage points above participating students, 71% and 58% respectively. That number is relatively stable.

Chart 11.5 SC



1. All students
 - The Science NPR for all Montana grade 11 students is 71%.
2. Students with limited English proficiency (LEP)
 - Statewide, the NPR for LEP students is 40%. (2001 LEP data were incomplete.)
The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparison
 - Statewide, all Montana students scored 31 percentage points higher than limited English proficient students. That number varies among school size categories because of the wide variation in the number of LEP students tested.